What is claimed is:

1.   A power strip, comprising:

a housing having a first end and a second end;

a plurality of power outlets mounted on an exterior surface of the housing;

a power management circuit defined on an interior region of the housing, including:

a current sensor circuit that is adapted to receive input power over an input power line, the current sensor circuit being coupled to a power supply and to the power outlets;

a micro-controller coupled to the power supply and to a relay driver, the relay driver receiving control signals from the micro-controller; and

a plurality of relays coupled to the relay driver and to the power outlets, wherein the relays receive a control signal from the relay driver to actuate the relays to a conductive state to powering-on the power outlets and the relays receive another control signal from the relay driver to actuate the relays to a non-conductive state to powering-off the power outlets.

2.   The power strip of claim 1, wherein the power outlets include a first group of power outlets and a second group of power outlets, the first group being coupled to the sensor circuit and the second group being coupled to the sensor circuit via the relays.

3.   The power strip of claim 2, wherein an input power source sensor circuit is coupled intermediate the power supply and the micro-controller, the input power source sensor circuit receiving primary input power from the power supply and receiving secondary input power from a secondary power source, whereby the input power source sensor circuit provides the primary input power to the micro-controller and if the primary input power fails, the input power source sensor circuit provides the secondary input power to the micro-controller.

4.   The power strip of claim 3, wherein the power strip further includes a plurality of communication ports.

5.   The power strip of claim 4, wherein the communication ports include a first communication port coupled to a communication-in circuit and a second communication port coupled to a communication-out circuit, the communication-in circuit and the communication-out circuit being further coupled the micro-controller.

10   6.   The power strip of claim 5, wherein the communication-in circuit includes the secondary power source.

7.   The power strip of claim 6, wherein the micro-controller is further coupled to an under voltage sensor, the under voltage sensor being adapted to receive a predetermined voltage-value from the power supply and being responsive to the predetermined voltage-value falling below a predetermined threshold value by providing a reset signal to the micro-controller.

8.   The power strip of claim 7, wherein the micro-controller is further coupled to a non-volatile memory device.

20   9.   The power strip of claim 8, wherein the micro-controller is further coupled to an audible alarm that can alert an operator that current on the input power line has exceeded a predetermined threshold value.

25   10.   The power strip of claim 9, wherein the micro-controller is further coupled to a mute button that which is actuated to silence the audible alarm.

11.   The power strip of claim 10, wherein the micro-controller is further coupled to an overload light-emitting-diode which is controlled to illuminate with a predetermined frequency to indicate an overload status of the input power line.

5   12.   The power strip of claim 11, wherein the second group of power outlets includes a plurality of light emitting diodes that can each be controlled to illuminate to indicate that an associated outlet is powered-on.

13.   A power distribution method comprising the steps of:
10   energizing an input power line to power-up a first group of power outlets on a power distribution system; and
        controlling a plurality of relays to actuate to a conductive state in accordance with a predetermined sequence and a predetermined delay to sequentially power-on a second group of power outlets on the power distribution system.

15   14.   The power distribution method of claim 13, wherein after the step of energizing, the method further includes intializing the power distribution system, intializing including the steps of:
        programming a normal-threshold value into the power distribution system;
20   programming an overload-threshold value into the power distribution system;
        programming an under-voltage threshold value into the power distribution system;
        programming delays into the power distribution system, the delays being related to powering-on and powering-off the second group of power outlets; and
        programming the sequence for which the second group of power outlets is powered-on
25   and powered-off.

15.   The power distribution method of claim 14, wherein the method further includes:
        sensing current on the input power line;
        providing the sensed current to a micro-controller; and

[Docket No. 18133-043]   Page -18-

determining if the sensed current is below the normal-threshold value,

wherein if the sensed current is below the normal-threshold value, the method further includes

indicating a normal operation of the power distribution system.

5   16.   The power distribution method of claim 15, wherein the method further includes the steps of:

determining if the sensed current is above the normal-threshold value; and

determining if the sensed current is below the overload-threshold value,

wherein if the sensed current is above the normal-threshold value and below the overload-

10   threshold value, the method further includes indicating a high current status of the power

distribution system.

17.   The power distribution method of claim 16, wherein the method further includes the step of:

determining if the sensed current is above the overload-threshold value,

15   wherein if the sensed current is above the overload-threshold value, the method further includes

indicating an alarm status of the power distribution system.

18.   The power distribution method of claim 17, wherein if the sensed current is above the

20   normal-threshold value and below the overload-threshold value, the method further includes

controlling a first group of predetermined relays to actuate to a non-conductive state to power-off

a number of associated power outlets.

19.   The power distribution method of claim 18, wherein if the sensed current is above the

25   overload-threshold value, the method further includes controlling a second group of

predetermined relays to actuate to a non-conductive state to power-off a number of associated

power outlets.

20.   The power distribution method of claim 19, wherein the method further includes:

controlling the plurality of relays to actuate to a non-conductive state in accordance with a predetermined sequence and a predetermined delay to sequentially power-off the second group of power outlets which are coupled to the relays; and

de-energizing the input power line defined on the power strip to power-off the first group of power outlets defined on the power strip.

21.   The power distribution method of claim 13, wherein powering-on the second group of power outlets further includes illuminating a plurality of light-emitting-diodes associated with the second group of power outlets.

22.   The power distribution method of claim 14, wherein the method further includes programming a maximum current draw value.

23.   A power distribution system, comprising:

a plurality of power strips, the power strips being mounted in an equipment rack, the equipment rack having a number of slots adapted to securely hold a number of pieces of equipment, each power strip including:

a housing having a first end and a second end;

a plurality of power outlets mounted on an exterior surface of the housing;

a power management circuit defined on an interior region of the housing, including:

a current sensor circuit that is adapted to receive input power over an input power line, the current sensor circuit being coupled to a power supply and to the power outlets;

a micro-controller coupled to the power supply and to a relay driver, the relay driver receiving control signals from the micro-controller; and

a plurality of relays coupled to the relay driver and to the power outlets,

wherein the relays receive a control signal from the relay driver to actuate the relays to a conductive state to powering-on the power outlets and the relays receive another control signal from the relay driver to actuate the relays to a non-conductive state to powering-off the power outlets.

24.   The power distribution system of claim 23, wherein the power strips mounted in the equipment rack are daisy chained together to form a scalable power strip.

25.   An intelligent power strip, comprising:

a housing;

a first group of power outlets defined on the housing;

a second group of power outlets defined on the housing; and

a means for controlling power to the first and second groups of power outlets in accordance with a predetermined sequence and a predetermined delay to sequentially power-on the second group of power outlets.

26.   The intelligent power strip of claim 25, wherein the means for controlling includes:

a means for programming the sequence for which the second group of power outlets is powered-on and powered-off; and

a means for programming delays into the power strip, the delays being related to powering-on and powering-off the second group of power outlets.

27.   The intelligent power strip of claim 26, wherein the power strip further comprises:

a means for sensing current on the input power line;

a means for providing the sensed current to a micro-controller; and

a means for determining if the sensed current is below a normal-threshold value, wherein if the sensed current is below the normal-threshold value, the power strip enables a means for indicating a normal operation of the power strip.

28.   The intelligent power strip of claim 27, wherein the power strip further comprises:

a means for determining if the sensed current is above the normal-threshold value; and

a means for determining if the sensed current is below an overload-threshold value,

wherein if the sensed current is above the normal-threshold value and below the overload-

threshold value, the power strip enables a means for indicating a high current status of the power

strip.

29.   The intelligent power strip of claim 28, wherein the intelligent power strip further

comprises:

a means for determining if the sensed current is above the overload-threshold value,

wherein if the sensed current is above the overload-threshold value, the power strip enables a

means for indicating an alarm status of the power strip.

30.   The intelligent power strip of claim 29, wherein if the sensed current is above the normal-

threshold value and below the overload-threshold value, the power strip further enables a means

for controlling a first group of predetermined relays to actuate to a non-conductive state to

power-off a number of associated power outlets.

31.   The intelligent power strip of claim 30, wherein if the sensed current is above the

overload-threshold value, the power strip further enables a means for controlling a second group

of predetermined relays to actuate to a non-conductive state to power-off a number of associated

power outlets.

32.   The intelligent power strip of claim 31, wherein the power strip further includes:

a means for controlling the plurality of relays to actuate to a non-conductive state in

accordance with a predetermined sequence and a predetermined delay to sequentially power-off

the second group of power outlets which are coupled to the relays; and

a means for de-energizing the input power line defined on the power strip to power-off

the first group of power outlets defined on the power strip.